Instruction Manual for Self balancing E-scooter

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1 Battery Description

Describes the Self balancing E-scooter charging method, how to care for the battery, you need to pay attention to security items and battery specifications .For your safety and that of others, prolong battery life and improve battery performance furthest, please be sure to follow the following operations to use the battery.

1.1 Battery specification

Battery type	Lithium battery	Working temperature	-15°C ~ 50°C
Charging time	2-3hours	Charging temperature	0°C ~ 40°C
Voltage	36V	Storage time20°C-25°C	12 months
Initial capacity	2-4A	Storage of relative humidity	5% ~ 95%

1.2 Battery low energy

When you find the power indicator light becomes red and flashing, it indicates low energy, for your safety, u should stop riding, there is not enough energy to operate you normal riding when the power is low, the system will automatically tilt the pedals to prevent the person from riding, if you insist on riding it at this moment, it is possible to fall down and get hurt, it will reduce the battery life also.

Cautions.

1 . Do not ride it if battery is Odorous or too heat.
2. Do not ride it if anything leaks out from battery.
3. Only professional can disassemble and maintenance battery.
4. Do not touch anything leaking out from battery.
5. Do not let children or animals touch the battery. Before installing the battery or riding ,please make sure to unplug the charger, It is very dangerous to do that when it is charging.
6. Do not open the battery or insert something into the battery as it contains dangerous substances
7. Only use the charger provided by our company to charge the scooter

8. It is forbidden to charge the over discharge lithium battery which has to be scrapped
9. The battery can only be used when it is allowed by local law

1.3 Charging

- Open the scooter charging port cover at back side.
- Make sure the charging port is dry, no foreign matter in the charging port.
- Connect the charger to the wall charger(1 00V-240V; 50 / 60Hz),make sure the charger light becomes green , then connect the charger to the scooter.
- When the charger light becomes red, indicating charging works well, otherwise check if it is connected.
- When the indicator light on the charger from red to green, the battery is fully charged, then please stop charging. (Self balancing E-scooter charging time is about two hours, too long charging time will affect battery life.)
- Please store and charge battery according to Hoyle, otherwise the battery is possible to be damaged and effect battery life.
- Too long charging time will affect battery life.
- Please keep charging environment clean and dry.
- When charging port is wet, do not charge it.

1.4 Temperature is too high or too low

- If you want balance in to run the most efficient, the battery temperature must be indicated on the battery specification temperature range.
- Temperature before charging and the charging process must be within the recommended values. Close to the recommended temperature, the charging efficiency is the highest, if it is too cold or hot, the charging time will be longer, or not fully charged.

1.5 Transporting a battery Note

WARNING:

Lithium batteries are considered as dangerous goods during transportation it needs to be permitted by the local law.

2 Safety use information

2.1 About safety use

For your security, please read the safety use information carefully, hope all the users can drive the scooter safety and enjoy the fun brought by it. Thinking back to how did you learn to ride a bike, drive a car, skiing or other similar vehicles, all the experiences are applicable to our products, and they can make you drive it better.

- Comply with relevant items in <Two wheel balancing scooter using manual>, you will drive the scooter safely. We strongly suggest you to read the manual before driving for the first time, you will get lots of important safety information, including speed limitation, indicator warning, shut down safety, etc.
- Please check whether there is damaged tires or loose accessories, if anything abnormal, pleased contact our agent immediately for maintaining.
- Please do not use it do anything that can cause damage to people or property's security.
- Please do not change scooter's parts optionally, because that will not only impact the performance, and even can cause more serious damage to the scooter.

2.2 Driving safety instruction

Please read carefully about the protective function of Self balancing E-scooter, this part emphasized some safety knowledge and warning statements, to make sure you have a know well about relevant safety notes before using it, those notes can improve driving safety and joy.

Warning:

- No matter driving under what kind of circumstances, it may cause harm to you due to losing control, collision or falling. In order to avoid damage, you must read carefully and refer to the instruction in user handling manual. Please ensure that the product is in good condition, and use it after reading carefully and knowing well about all the instructions or manuals.
- When you learning how to driving, please make sure that every safety measures are taken, such as wearing helmet, knee cap, elbow pad, etc.
- Two wheel balancing scooter only for personal entertainment, it's prohibited to use in public transportation.
- Prohibited to use it on vehicle road.
- Children, old men and pregnant women are prohibited to drive it.
- Prohibited to drive it after drinking or taking drugs.
- Prohibited to drive it with carrying goods.

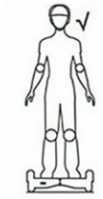
- Please abide by the local traffic regulation, avoid pedestrian while driving.
- Please take aware of the things that in front of you or in the long distance before you, keeping long distance vision is helpful for your safety driving.
- Relax you legs and bent you knee slightly, that would keep you balance when you driving on uneven ground.
- Keep you feet on the foot pad while driving.
- Wear suitable sports clothing while driving, that is helpful for you to handle emergency situation.
- Can be drive only for one person, two or above are prohibited.
- Total weight of user and belongings mustn't more than the weight that instruction manual defined, or users are more likely to fall or injure, or even cause damage to scooter's function.. Besides, user's weight should be in the defined range, or user can't control it, especially you can't lower the speed or stop safely while downing the slope.
- Make sure the safety driving speed, and you can stop it to avoid causing any damages to yourself and others.
- While driving with others, please the safety distance to avoid any collision.
- Please keep in mind that your height is 1 0cm higher than usual, so make sure your head is safe before through a door.
- Pay attention to the balance of body center of gravity when steering action to prevent falling off because of center of gravity offset or too fast
- Do not distracted when driving, like using mobile phone, listen music by earphone or any other things that could distracted you.
- Driving on wet road, long distance backward driving, high speed backward driving, high speed turning back, over speed driving are not allowed.
- Do not driving in dim light or dark place.
- Avoid driving on the ground with obstacles or slick ground, such as snowfield, ice ground and wet floor.
- Please drive it in the circumstance that two wheel balancing scooter is allowed, if only get permission can use it, then ask for permission first.
- Please do not start or stop suddenly.
- Avoid driving on steep slope.
- Prohibited driving in unsafe circumstance. Unsafe circumstance means the dangerous places, such as fire or explosion that caused by fire gases, steam, liquid, dust or fiber, etc.
- Two wheels balancing scooter built-in inertia stable system can keep the balance of the forward and backward directions, but can't assure the stability of the left and right directions. So drivers must slower the speed when turning to avoid damage.

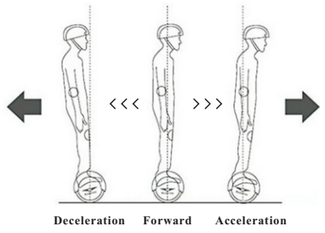
3.Product Introduction

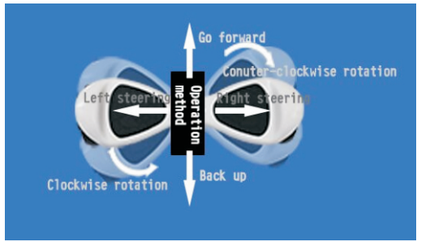
3.1 Self balancing E-scooter brief description

Self balancing E-scooter are new high-tech means of transport, outdoor sports products, which uses aerospace control theory,fuzzy algorithm, gyroscope and acceleration sensor system, it detects changes in body posture based on body weight change and the server control system, which can precisely drive motor to adjust to achieve the longitudinal direction of the self-balancing. User slightly forward and back through the body, to achieve progress, acceleration, deceleration,braking and other operations; when you need turn, slow down and in accordance with the need to control the left and right of self-steering, move foot a little forward or backward, the body center of gravity shifted to the left, scooter turn left, changing to the right, scooter turn right.

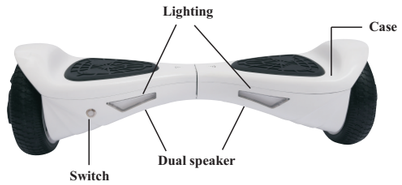
Smart scooter comes with a stylish lightweight balanced appearance, simple operation, flexible control, easy to carry, low carbon and environmental protection, it is the perfect companion for recreation, scenic tour, short-haul travel and other life applications.

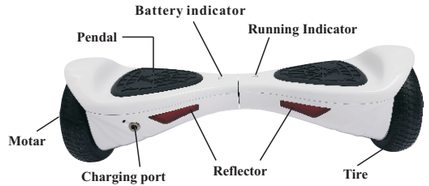






3.2 Self balancing E-scooter components introduction





4 Function introduction

4.1 Pedal sensor

There are two sensor switches under the pedals of Self balancing E-scooter, when the user steps on them, the sensor switches were turned on, Self balancing E-scooter will automatically adjust to the equilibrium state; when rider get down from scooter, sensor switch is closed, and smart scooter start the standby mode.

- When riding on scooter, please keep the foot on pedal, do not tread outside.
- When power on, please do not put other articles on pedals, which keep sensor switch always on, can't turn off, finally increase the chances of collision.

4.2 Indicator lights

Indicator lights are located in the middle section, displaying running information of smart scooter.

- **Battery status indicator:**

(1) 4 Green light indicates that the smart scooter has enough power.
(2) When only have 3 green light, it represents 75% of available power.
(3) When only have 1 green light,it represents 50% of available power.

(4) When it with Round sign,it represents 25% of available power.
(5) When the light turn red, you should stop driving, and charge it in time.

- **Running indicator lights:** after the rider stepped on pedal, running lights will be lit, the green light indicates the system into operation; red light indicates that the system abnormality, this time riding ban.
- **LED running lights**

  LED Running lights located on the underside of the pedal, opposite the power switch.
  When the scooter is running straight or stationary, the LED running lights are keeping on.
  Running lights flashing when steering.

4.3 Bluetooth stereo speaker

Combination of High-quality Bluetooth module and high-quality stereo speakers, while walking to listen, let your journey is no l on ger monotonous; Bluetooth stereo speakers, can be connected with phone, IPAD, laptops and other electronic devices have Bluetooth connectivity, compatible with most mainstream mobile phones: Apple, Samsung, Hua wei, millet, HTC and so on.

Bluetooth speakers usage:

1 . Turn on the Bluetooth Speaker.
2. Open the Bluetooth device to search for Bluetooth speaker.
3. Find Bluetooth speakers and pairing Bluetooth devices to play music after Bluetooth speaker paired.
4. Adjust the volume up and down , pause, play and other functions with Bluetooth device.

4.4 Protection

When riding, if there is a system error or faulty operation, the two wheel scooter will alarm the driver with lights and. Please stop riding when Alarm indicator light, buzzer alarm beeps intermittently, the system can not enter the self-balancing mode and charging .

Self balancing E-scooter will automatically enter stop state when following phenomenon occurs:

1 . Foot pad forward or backward more than 35 degrees, scooter will enter the stopped state.
2. When riding, foot platform forward or backward more than 1 0 degrees, scooter will enter the stopped state.
3. When there is something wrong with the tire , it will enter the stopped state after two seconds.
4. If the battery voltage is below the protection point, it will enter shutdown state after 1 5 seconds.
5. If continued large current discharge (such as long time climbing), it will come into the shutdown state after 1 5 seconds.

When riding, please be careful if there is any of the following phenomena:

1 . When riding, if the battery is low or over speeding, foot platform upturned, it is prohibited to continue.
2. When scooter is over speeding, control ability becomes weak, need lowering speed.
3. The body rocking back and forth more than 30 seconds, stop riding .
4. When system come into protected mode, running indicator will turn red light, buzzer will alarm at a high frequency.

Warning:

When the two wheels scooter to enter the shutdown state, the system will automatically lock machine; please press the lock key to unlock the machine. please do not continue to drive the two wheel scooter when the battery is low. otherwise, the scooter can not keep balance due to lack of electricity. in this case, the driver is likely to be hurt. When the battery power reaches a minimum point, If continue to drive the scooter, it will affect battery life.

5 Performance Introduction

5.1 Ramp angle

Two wheel scooter maximum climbing angle is affected by many factors, it can be up to 25 degrees, but the climbing angle, the driver weight, battery charge saturation, driving skills will affect it.

WARNING

Before climbing, it can not sprint, must be riding uphill slowly, when the motor torque is not enough, drivers should get off immediately to avoid the scooter retreat or danger of falling; when riding downhill, please be slowly. otherwise, inertia will cause scooter being out of control.

5.2 The driver's weight limit

- Driver's maximum weight limit: 120 kg
- Driver's minimum weight limit: 20 kg
- The reason for limiting driver weight has the following points: 1 ensure the driver's safety; 2 to reduce damage for scooter.

WARNING

● Overweight will have falling danger.

5.3 The maximum Range

Two wheels scooter ' s maximum range is 20 kilometers, the maximum range is affected by many factors, such as:

● Land types: smooth, flat ground driving will increase with distance, or it will reduce distance.

● Weight: The weight will affect maximum Range

● Ambient temperature: Store at recommended temperature will increase with distance, or it will reduce maximum Range.

● Maintenance: reasonable battery charging and maintenance will increase the travel distance, or it will reduce the traveling distance.

● Speed and driving style: Keep a moderate speed will increase with distance, if frequent start, stop, accelerate, it will reduce travel distance.

5.4 Speed Limit

● Self balancing E-scooter's maximum speed of 1 0km / h.

● When the driver reaches the maximum speed, the scooter will buzzer to alarm.

● When riding at a predetermined speed, it can maintain the balance of the driver. when the driving speed is greater than the set speed, the scooter will buzzer to alarm, so that it can be in a safe speed.

6 Self balancing E-scooter study skills

Riding scooter must be careful, therefore, you must fully understand all "User Manual" before driving.

6.1 Self balancing E-scooter steps:

● Step 1 : Turn on the scooter, ready to start,the scooter will be in the state for beginners.After turning off the power, press the switch 2 times constantly,the scooter will be in normal state,its speed will be faster.

● Step 2: Riding preparation, use one foot to touch both pedal switches, triggering running lights green, the system entries the self-balancing state, make the scooter in the horizontal position and stable.

● Step 3: One footstep on the pedal first, running light gets green, the system becomes self-balancing state, step on

with the other foot to ride it after the scooter is stable

● Step 4: Keep the balance after step on the scooter, scooter will stay stationary. According to lean forward or backwards your body to control the balance of scooter forward or backward, be sure not to move your body dra sticly.

Remind

If the pedal switch of the scooter is not in the horizontal position after u touch it by your foot, the buzzer will beep, and running light get red, the system can not entry self-balance state, then the operation is prohibited at this moment.

● Step 5: Control scooter to turn direction with your left and right foot to pressure the foot pedal.

● Step 6: Step down, you need to make the scooter stationary equilibrium, keep a state of equilibrium, get down one foot from the scooter backward, then get down the other foot from the footpad.

Warning:

● Do not turn rapidly in high speed to avoid dangerous situations.

● Do not shift laterally or turn direction on the slope, it will make scooter balance equilibrium angle skewed to affect riding safety.

6.2 Scooter practice

Before you ride the scooter outdoor, for your safety, please make sure that you have been able to skillfully ride the scooter:

● Choose the smooth ground.

● Try to wears ports clothing, and wear flat shoes, let the body maintain flexibility.

● Please practice how to ride the scooter in a open ground, until you can easily get on the scooter, forward and backward, turn direction, get off.

● You can learn to ride on different grounds, in case of unfamiliar terrain please ride slowly. Never make the scooter off the ground.

● Scooter is flat pavement design for the use as a complementary type oft ran sport. When the user travels overrun even pavement, Please ride slowly.

● If you can not ride the scooter skillfully you should not ride it to dangerous places with pedestrian or obstacles, be careful of your head when you go through the door, and ensure go through normally.

7 Routine maintenance

Self balancing E-scooter requires the user to perform routine cleaning and maintenance.

Cleaning Note:

- Make sure that the balance of micro-wheeled vehicle power supply and charging cable is disconnected.
- Two wheel scooter power is off .
- Wipe the case with a soft cloth to clean the balance of micro-wheeled vehicles.

Caution:

Self balancing E-scooter designed wheeled dust and waterproof rating of IP57 limit of fine dust and splash proof; prohibiting the use of high pressure water jets or immersion in a liquid balance on the two wheel scooter vehicles for cleaning. Avoid water or other liquids seep into the car, which will lead the host cause permanent damage to the internal electronics.

Store

- Please make sure your two wheel scooter is full charged before store it to prevent excessive discharge if long placed.
- If the storage two wheel scooter will be placed more than one month , remove the battery storage, and ensure that at least every three months on the two wheel scooter to full discharged.
- Ensure the battery full charged to prevent the long time does not use leads to excessive battery discharge.
- If store more than one month, please take out the batter, ensure the scooter is fully discharged at least every three months.
- Please do not charging if temperature low e 0°, need to put the scooter to the template over 1 0°then charging.
- You can mask the scooter, to prevent micro dust affects the performance.
- Please put the scooter in drying temperature, indoor place

Warning

- In order to protect the safety of the user, the user can not opened scooter himself, otherwise mean users give up the product maintenance warranty rights.

8 Basic parameters

Item	JC-1665		JC-1680	
	Low	High	Low	High
Image				
Basic information				
Max.Speed	10Km/h		10Km/h	
Max.Range	20km		20km	
Climb Angle	25°		25°	
Turning Radius	0°		0°	
Battery Voltage/Capacity	36V/4.4AH		36V/4.4AH	
Motor	36V/250W		36V/250W	
Mini.Load	20Kg		20Kg	
Max.Load	100Kg		100Kg	

Item	JC-1665		JC-1680	
	Low	High	Low	High
Body Information				
Body Technology	UV		UV	
L * W * H	570 x 180 x 180 mm		580 x 200 x 210 mm	
Chassis Ground Height	80mm		100mm	
Height between chassis and ground	135mm		150mm	
Width of pedal	180mm		200mm	
Weight of Unit	10Kg		10.5Kg	
Multifunctional Applications				
Bluetooth stereo		●		●
Colorful indicator light	●	●	●	●
Reflector	●	●	●	●
Beeper	●	●	●	●
Power display	●	●	●	●

Item	JC-1665		JC-1680	
	Low	High	Low	High
Security Configuration				
Limit protection	●	●	●	●
Low voltage protection	●	●	●	●
Forward	●	●	●	●
Backward	●	●	●	●
Motor Parameters				
Motor wheel diameter	6.5 inch		8 inch	
Rated voltage	36V		36V	
Rated power	250W		250W	
Rated speed	≥450rpm		≥450rpm	
Phase	120°		120°	
Protection class	IP54		IP54	

9 Troubleshooting

Two wheeled scooter self-test checks the balance of the project are: a sensor system quiescent current, dynamic current, motor speed fluctuations.

When the 2 wheeled balance fails or self-test fails, you can not resolve, please contact the sales point for help. About service points and related information, please visit our website:

Tune the balance	The off state, will adjust the pedal to the level of state, long press on key 5 seconds can; in the process of adjusting the balance of the first three seconds will 'beep' sound, 5 seconds underwent lights flashing, successful commissioning, shutdown you can restart
Mode switch	Power switch is pressed again within 2 seconds
Unable to charge	Check outlet has power, whether the normal charger indicator lights, charger line connection is good
Unable to start	Check whether the battery has power

10 Packing list

No.	Standard Package	Quantity
1	Main unit	1 PC
2	Charger	1 PC
3	Instruction Manual	1 PC
4	Warranty Card	1 PC
5	Safe driving,strictly prohibited items	1 PC